

ABSTRACT

Gateway load balancing and failover methods, apparatus and systems use more than one gateway device in a gateway device group for communications directed outside of a LAN. In the load balancing arrangement, hosts that send ARP messages to a shared virtual IP address receive replies from one of the gateway devices in the gateway device group, directing the host to address outgoing communications to a virtual MAC address assigned to one of the gateway devices. Hosts are assigned virtual MAC addresses for the gateway devices according to a prescribed algorithm or methodology. In the event that one member of the gateway device group fails, the outgoing communications that would have been handled by the failed gateway device are re-assigned to another member of the gateway device group. A master gateway device controls address assignment and failover features. In the event that the master fails, additional steps are taken to appoint or elect a new master and ensure continuity in the load balancing function.